Use and Installation Manual For Cassette type fan coil

The installation should be completed by qualified technicians.
For your convenient use, please read this manual and operate the fan coil by following the steps indicated in the manual.
Please keep this manual in good condition for your reference in the future

MFY/08-A

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In case one of following conditions should happen, please stop the AC unit immediately, switch off the power supply and contact your dealer or local Customer Service Centers	
Symptoms	When there is a fault symptom listed in above table, the same fault persists after the indoor power supply is switched off and then switched on again.
	The fuse wire is frequently blown out or the circuit breaker acts frequently.
	The indoor unit (or outdoor unit) gives out high abnormal noises
	The indoor unit shivers and there are other symptoms indicating that it is not installed steadily and firmly.
	There is serious water leakage in indoor unit.
	There happen other abnormal conditions

In case one of the following conditions should happen, please check the AC unit as shown below. If the problems persist, please contact your dealer or local Customer Service Centers and inform them of the product type and fault details.

Fault	Possible Causes	Solutions
AC Unit cannot start up	No power is supplied.	Wait for power resumption
	Power switch is not turned on	Turn on the power switch
	Fuse wire of power switch is molten	Replace the fuse wire
	There is no voltage in the batteries in remote controler	Replace the batteries
	The switch-on timing set for AC unit does not expire	Wait for expiration of switch-on timing or cancel it
Air is blast but there is poor Refrigerating (heating) effect	Improper temperature setting	Correctly set the temperature, and adjust it to a higher value or lower value. Refer to "How to Use AC Unit" for the method.
	Air filter gauze is blocked with dust or dirt	Clean the filter.
	The air inlet or outlet of indoor unit is blocked	Remove the blocking
	Doors or/and windows are open	Close doors and windows
	Too great heat (cooling) load in rooms	Close the heat (cooling) sources
Air is blast but no refrigerating or heating is available	Improper temperature setting	Re-set the temperature
	Improper mode setting	Set correct mode
Dews exist on the panels	Too high indoor dehumidify	Switch on high-speed wind in rooms and open the wind guide bar to maximum.

⚠ Warning

Never cut off the power line, in order to prevent dangers!

Never repair the AC unit by yourself!

Safety Precautions

- Please confirm that you have read at least the "Safety Precautions" part of this manual before using this air conditioning unit, for this part provides very important points about safety. Please be sure to follow these safety precautions in the operation.
- Meaning of the symbols used in the manual

⚠WARNING Incorrect use and operation will possibly cause death, serious injury or other major accidents.

⚠NOTICE Improper use will possibly cause safety accidents or damages to the unit or affect the use effect of this unit.

Please read the labels on the unit carefully.

If you find any abnormal conditions, for example, noises, odor, smoke, temperature rise, current leakage or fire, please immediately disconnect the power supply and contact the local customer service center or dealer, and never repair the unit by yourself. Please immediately contact the local fire fighting authority and first-aid center if necessary.

⚠ WARNING

This unit must not be installed by users, and must be installed by the dealers or special installation companies authorized . Or otherwise, safety accidents will possibly caused and use effect will possibly be affected.

Unless experts give instructions on the operation, non-professional persons must not disassemble this unit. Or otherwise unexpected events may be happen or this unit may be damaged.

Never use or store inflammable gases or liquids under and around this unit, for example, fixature, paints and gasoline. Or otherwise there will be the possibility of fire.

Main power switch of the air conditioning unit should be mounted at a place out of children's reach, in order to prevent children from playing with this switch, which may be cause dangers.

Do not spray water or other liquids on this unit. Or otherwise dangers may be caused.
Do not touch this unit with wet hands, or otherwise electric shock may be caused.

Please disconnect the main power switch of this unit in case of lightning storms. Or otherwise lightning may be cause dangers or damages to the unit. Please disconnect the main power switch of this unit in order to prevent unexpected events if it is not used for a long time.

⚠ NOTICE

Never put your hands or foreign matters into the air inlets and outlets of the indoor unit . Or otherwise the fans running at high speed may endanger your safety.

Never dampen the indoor unit or remote control, or otherwise short-circuit may be caused or the unit may be damaged. After cleaning the dust filtering net, please close the air inlet grille in position, and never keep it opened for a long time. Or otherwise dangers may be caused.

Installation

Before installation of the equipment, please read all the "Safety Precautions".
Please follow this manual in the installation.
Please read the labels on this unit carefully before installation.

⚠ Warning
This unit must not be installed by users, and must be installed by the dealer or authorized technicians.
Any change of building structure required for the installation must comply with the requirements of local architectural standards.
This unit must be installed on the ceiling that can support its weight.
It is necessary to use the designated cables or the cables complying with the requirements for connections.
In accordance with local regulations and the instructions given in this manual, all electrical operations must be carried out by qualified technicians.
Please ensure personal safety during installation.
Please do not switch on the power supply before completion of the installation.

⚠ Caution
After installation technicians install the AC unit correctly, they should give the users the instructions on the correct use and maintenance of this unit according to the user's manual, and read this manual carefully and keep it in good conditions.
This unit must not be installed in the areas where there is high volatile oils (including machine oil) or sulfuric acid fog. Or otherwise its performance will be deteriorated seriously or internal parts of the unit will be damaged.
It is necessary to use the fuse wire of specified capacity or higher capacity.
Ensure to install one earthing-leakage current disconnector.
Ensure to install one earth connection.
If this AC unit is installed on metal part of a building, good electric insulation must be provided, which should comply with related technical standards for electrical equipment.

Ⅰ.Preparations Prior to Installation

Select installation position

* Indoor Unit

1. Select the place that allows enough space for installation and maintenance.
2. Select the position on the ceiling that can support the weight of indoor unit.
3. Select the place where the incoming air and outgoing air are not blocked and the influence of external atmosphere is minimized.
4. Select the place under which there is not smoke, open fire or other heat source or harmful pollution.
5. Select the place where the air-blast stream can be delivered to anywhere in the room.
6. Select the place which allows easy installation.

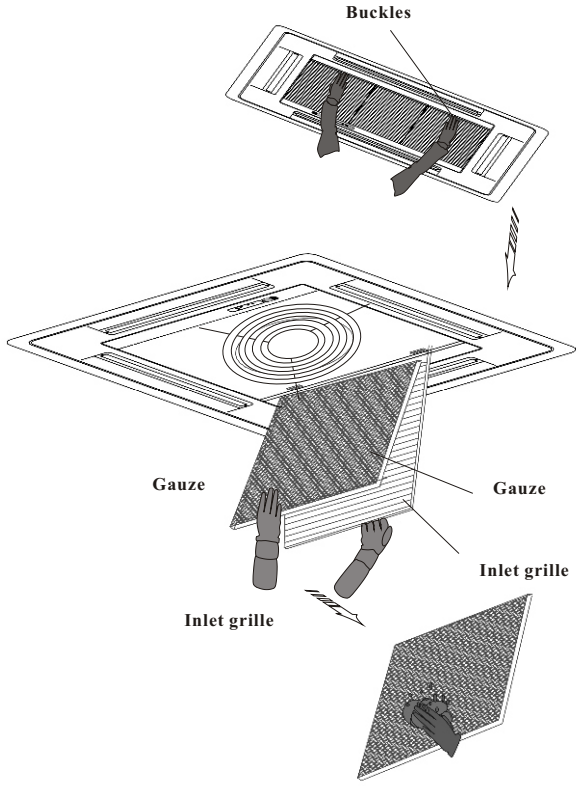
Maintenance and Service

⚠ Warning
For the sake of safety, ensure to switch off the AC unit and disconnect its power supply before you clean the AC unit.

Clean air filter

If the air filtering gauze is blocked due to dusts or foreign substances, refrigerating or heating effect will be affected, and there is much possibility of blasting air with odor. Therefore, the filtering gauze should be cleaned frequently.

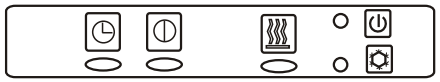
1. Hold the two buckles of the inlet grille in hands and pull the inlet grille off the panel; (for 50 series, please first push the buckle positions to "OPEN" position)
2. Pull the filtering gauze out of the groove of inlet grille;



Manual Control Mode

You can enable manual control mode, in order to switch on the AC unit when your remote control is lost or cannot work normally.

Manually enable "Forced running" mode



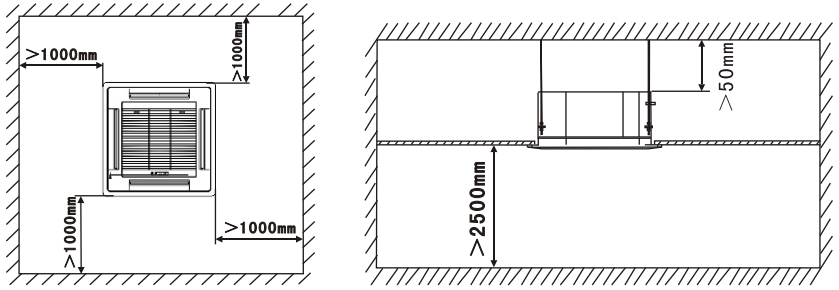
After confirming that power supply is turn on, press the key ⏻ , the unit will give a sound, and the running lamp will turn on, it
shows that the function <forced running> has been select.
The unit will work with this way as show below:

Room temp	setting temp	Timing mode	Fan speed setting	Working mode
>25	25	no	auto	cooling
<25	23	no	auto	heating

Press the ⏻ key again, after you hear the sound, all the pump will turn off, and the unit stop working.

You can press the on/off key of the remote controller, after hear the sound, the unit will work appond the setting mode of the remote controller.

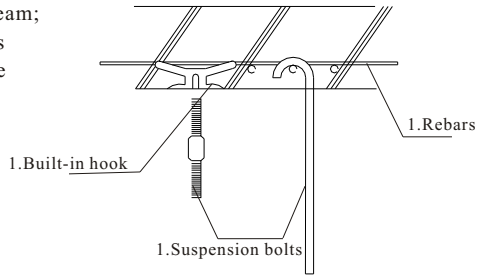
Reserve installation space for indoor unit



Installation of indoor unit

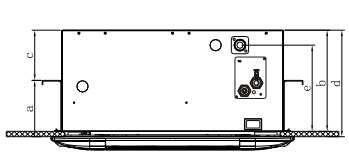
1. Determine the dimension of opening on the ceiling according to the dimension range indicated in dot line box in above-mentioned figure.
2. Select the suspension foundation.
   The suspension foundation must be firm and reliable, and can support the wooden frame and reinforced concrete structure that weigh more than 200kg. It is necessary to select the structure able to resist against certain vibration and keep firmness and supporting capacity for a long time as the suspension foundation.
   Before construction, please consult the construction contractor and indoor decoration contractor and obtain their recognition.
3. Fixing of suspension bolt
   Fix the suspension bolts in following methods or install the suspension bolts on iron bracket or wooden bracket.

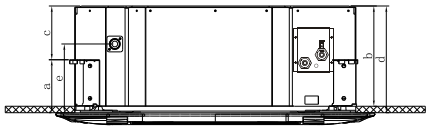
a:Ceiling; b. Beam; c. Cross beam; d. Top beam;
e: Suspension bolts M10（3/8〃） f. Rebars
g: Built-in hook that supports 120kg or more

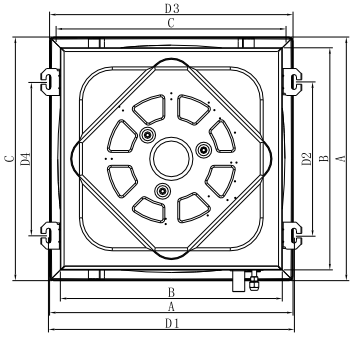


During installation of indoor unit on the ceiling, it is necessary to note that the ceiling must be in level position, and in order to prevent ceiling vibration, it is necessary to reinforce the ceiling.

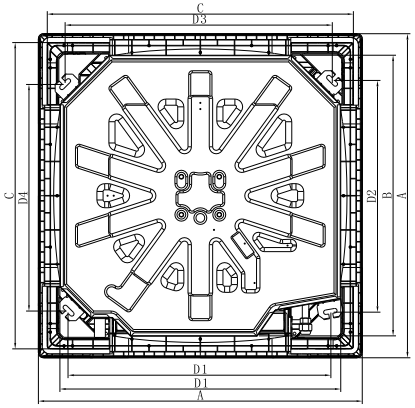
Ⅱ.Installation of Indoor Unit







E1--SERIES



E2、E3--SERIES

MODEL	Air volume (m3/h)		E1--SERIES	E2--SERIES	E3--SERIES		
			340、510、680、850	850、1020、1360	1020、1360	1700、2040	2380
	label	unit					
distance from hook toceiling	a	(mm)	154 ~ 159	154 ~ 159	154 ~ 159	154 ~ 159	154 ~ 159
thickness of unit	b	(mm)	270	293	260	293	343
distance	c	(mm)	136	159	124	159	209
The Min. Space necessary of ceiling	d	(mm)	290 ~ 295	313 ~ 318	263 ~ 293	313 ~ 318	363 ~ 368
distance from water outlet to ceiling	e	(mm)	230	182	202	182	232
panel dimension	A	(mm)	650	850	950	950	950
indoor unit dimension	B	(mm)	593	752	822	822	822
dimension of opening on the ceiling	C	(mm)	610 ~ 630	780 ~ 810	875 ~ 910	875 ~ 910	875 ~ 910
distance of hooks(1)	D1	(mm)	656	702	766	766	766
distance of hooks(2)	D2	(mm)	410	625	675	675	675
distance of hooks(3)	D3	(mm)	656	713	781	781	781
distance of hooks(4)	D4	(mm)	410	631	663	663	663

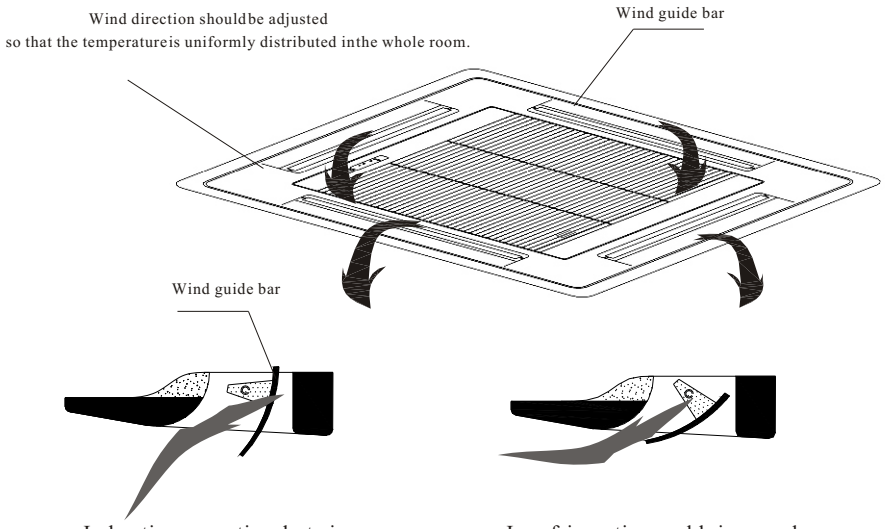
Adjustment of air outgoing direction

Wind guide bars are installed at air outlet on the panel of this air conditioner. The guide bars can adjust outgoing air stream in vertical direction and deliver air stream to the place in the room that needs it most urgently.

Please do not touch wind guide bars with hands. Or otherwise the drive mechanism will possibly be damaged!

The four wind guide bars of this air conditioner are interlinked.

Setting method: after confirming that indoor fan of this air conditioner is switched on, press "Air flow" button on the remote controller, and wind guide bars start to swing. After they swing to the positions required by you, press the "Air flow" button again, the guide bars will stop at current positions.


Wind direction should be adjusted
so that the temperature is uniformly distributed in the whole room.
Wind guide bar
Wind guide bar

In heating operation, hot air goes up, and wind guide bars should be adjusted so that air outgoes downwards.

In refrigeration, cold air goes down, and wind guide bars should be adjusted so that air outgoes upwards.

Precautions for Use of Remote Control

If there are curtains, doors or other objects blocking the signals transmitted from remote controller, the air conditioner will be beyond the control of remote controller.

Prevent any liquids from entering remote controller. Keep remote controller away from direct sunlight and do not store it in very hot places.

If the remote controller is affected by other electronic devices, please move away these devices or contact air conditioner dealers of our company or the technical service department for air conditioners of our company.

When the batteries are replaced, do not use old batteries or different types of batteries. Remote controller faults will possibly be caused.

If the remote controller is not to be used for a long time, take out the batteries. Or otherwise electrolyte will possibly leak and cause damages to the remote controller.

If reset occurs when the buttons on remote controller are pressed, or the LCD screen gives an unclear display, the batteries possibly have undervoltage. Please replace the batteries with new ones.

Operating Instructions for Remote Controller

How to set automatic mode

1.Press the Mode button and select "Automatic".
2.Press Adjustment button, and select the temperature you require (which is usually set at 21℃~28℃).
3.Press Switch On/Off button, and Run indicator on indoor unit will come on. The air conditioner will start to operate in automatic mode, and the fan speed is automatically controlled, and there is no wind speed indication on display screen of remote controller.

Stop: press the Switch On/Off button again to stop the operation.

Note: In automatic mode, air conditioner can compare the room temperature with the preset temperature, and automatically select appropriate operation mode: "refrigeration", "Air blast" or "Heating". If you feel uncomfortable in "Automatic" mode, you can select other operation modes.

Operation Steps for Refrigeration/Heating (not applicable for Cool-only unit)/Air blast

1.Press the Mode button and select any of "refrigeration", "Heating" and "Air blast" modes.
2.Press Adjustment button, and select the temperature you require (which is usually set at 21℃~28℃).
3.Press wind speed button, and select any of "automatic", "Weak wind", "Medium wind" and "Strong wind".
4.Press Switch On/Off button, and Run indicator on indoor unit will come on. The air Conditioner will start to operate in the mode selected by you.

Stop: press the Switch On/Off button again to stop the operation of the air conditioner.

Note: Temperature cannot be set in Air Blast mode, where only Steps 3 and 4 operations are allowed.

Operation Steps for Dehumidification

1.Press the Mode button and select "Dehumidification" mode.
2.Press Adjustment button, and select the temperature you require (which is usually set at 21℃~28℃).
3.Press Switch On/Off button, and Run indicator on indoor unit will come on. The air conditioner will start to operate in Dehumidification mode.

Stop: press the Switch On/Off button again to stop the operation of the air conditioner.

Note: In Dehumidification mode, the air conditioner will automatically start up repeatedly or stop refrigeration operation and fan operation depending on different temperature settings and actual temperatures.

Set timed

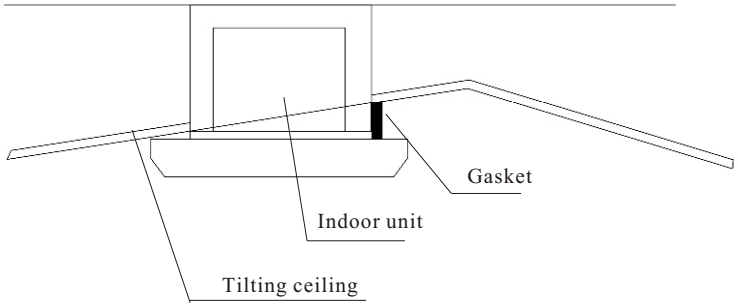
Set timed switch-on:

1.Press "On timer" button, and the remote controller will display Timed Switch-on. Meanwhile last timed switch-on time setting will be indicated digitally together with hour symbol "h". The remote controller enters timed switch-on adjustment status.
2.Press Adjustment button "▲" and "▼", and adjust the time for timed switch-on to the value you require.
3.0.5 second after adjustment is completed, the remote control sends information for timed switch on. 2 seconds later, the time symbol "h" will disappear, and digital display area resumes temperature indications and the setting of timed switch-on is completed.

Set timed switch-off:

1.Press "Off timer" button, and last timed switch-on time setting will be indicated digitally in digital display area, together with hour symbol "h". The remote controller enters timed switch-on adjustment status.
2.Press Adjustment button "▲" and "▼", and adjust the time for timed switch-off to the value you require.
3.0.5 second after adjustment is completed, the remote control sends information for timed switch off. 2 seconds later, the time symbol "h" will disappear, and digital display area resumes temperature indications and the setting of timed switch-off is completed.

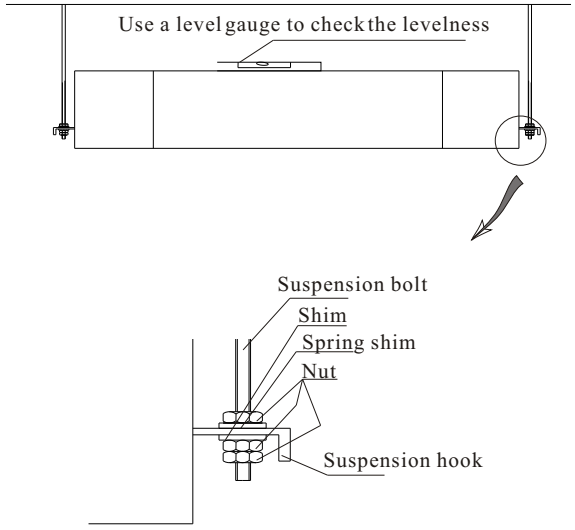
If this unit body is installed on a tilting ceiling, a gasket should be installed between the ceiling and the air outlet panel, in order to ensure that this unit body is installed on a level surface.
As shown in right figure:



Suspend indoor master unit

The indoor master unit should be suspended as shown in the sketch below:

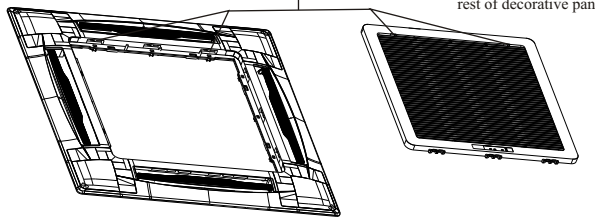
1.Adjust the relative position of the suspension hook on the suspension bolt so that the master is in Level position in all directions. Check with a level gauge after completion of installation in order to ensure the level of indoor master unit. Or otherwise water leakage and air leakage may be Caused.
2.Tighten the bolt and ensure that four hooks are in close contact with the nuts and shims, and the unit is suspended firmly and reliably onto the hooks.
3.Ensure that after the master unit is installed, it will not shake or be fixed unsteadily.
4.Ensure that the center of the indoor master unit should almost coincide with that of the opening on the ceiling.



Installation of Outlet Panel

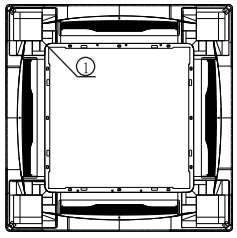
E2、E3--SERIES

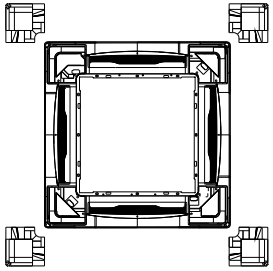
dismounting the wind inlet retainer.



Pulling down this flexible plug to open air intake grill. opening the air intake grill to about 60 degrees, Then pushing up a little to take out the air intake grill. Withholding decorative cover of panel by fingers, and pulling it out. Using the same method to open the rest of decorative panels.

dismounting the cover of out decorative panels

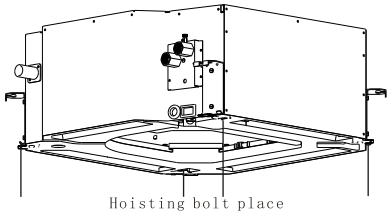


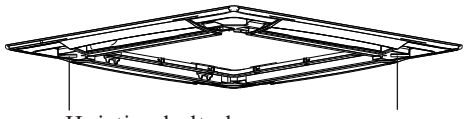


① Covers outside the kneading board with the finger to decorate covers toward the outside plank, the similar method opens outside other dalle

panel installation

1.After dismounting the cover of out decorative panels, rotating the lifting bolt inside to make the lifting hook in back panel reach out to the largest position.
2.Finding the corner of panel body with "red arrow", it should accord with oulet side pipe during installation.
3.The oulet side pipe and the position of panel hook opposite should be in the machine. The other hook position is on the lifting hook of the machine body.
4.Making the good angle panel align with air oulet. Firstly, hanging the two hook in machine body, then hanging other two hooks on lifting hooks in the machine boday. Afterward, orderly rotating the four lifting bolts on panel surface in diagonal, to make the air oulet of panel affixed to the machine outlet tensely without seam.
5.Installing the cover of out decorative panels and air inlet grid back according to the process of dismounting the air inlet grid and cover of out decorative panels.





Hoisting bolt place

Operating panel

Receiving head of remote control signal: receive the operation instructions sent from the remote control. For faster and more effective remote control operations, please point the transmitting head of your remote control to the receiving head of remote control signal when you operate the remote control. Buzzer: the buzzer will give a sound when the air conditioning unit is switched on for the first time, or you remotely control or touch the air conditioning unit as long as these operations are received by the receiving head. When there are any faults with the air conditioning unit, the intelligent diagnosis system of this unit will automatically determine fault type and indicate the fault code through indicator. Please refer to "Air Conditioning Unit Troubleshooting and Solutions" for the fault codes.

Operation panel sketch

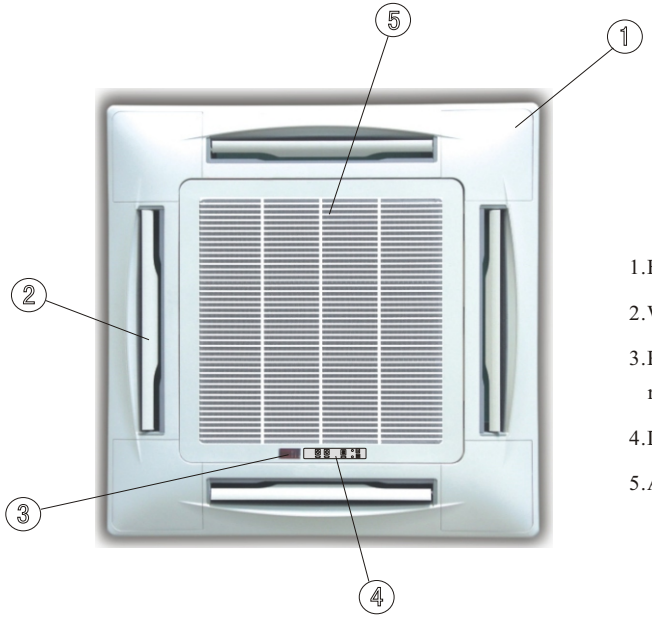
Buzzer and Receiving head

Indicator: Time indicator Operation indicator Electric assistant heating indicator
Touch switches: Automatic key (is no use to fan coil type unit)
Indicator: indicator cannot be operated.
Operation indicator :This indicator comes on when the air conditioning unit is switched on
Time indicator :This indicator comes on when time switch-on or time switch-off is set.
Electric assistant heating indicator :This indicator comes on when electric assistant heating function of the air conditioning unit is turned on
Touch switches:
Automatic key :When this key is pressed in standby state of air conditioning unit, the air conditioning unit will run in automatic mode (please refer to the subsequent instructions on "automatic mode"); when this key is pressed in running state, the air conditioning unit will enter standby state.

⚠
For better use of this AC unit, please use this unit according to the "Operating Conditions of fan Coil Unit" provided in this manual. Or otherwise water dripping may be caused, and use effect of AC unit may be affected.
Please correctly adjust indoor temperature, especially when there are old people, children or patients in the rooms.
Lightning and other electromagnetic field radiation sources may have influence on this unit. In case such influence really has occurred, unplug the main power supply. Re-plug the power supply, and then switch on the unit again.
Never block or cover the air inlet or outlet of indoor unit or outdoor unit.

Parts of Front Panel and Their Functions

Front Panel Construction



1.Front Panel Body

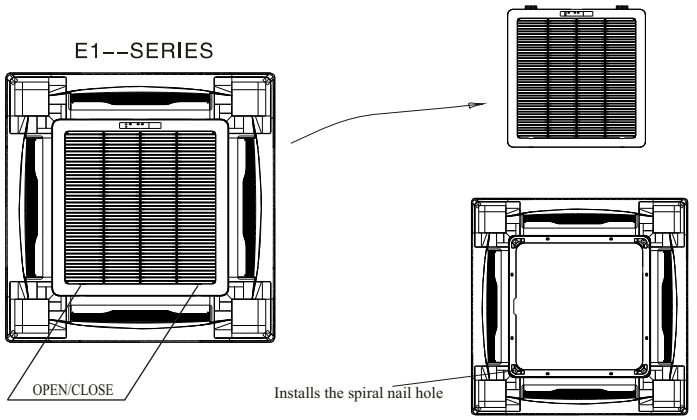
2.Wind guide plate

3.Receiving head of remote control signal

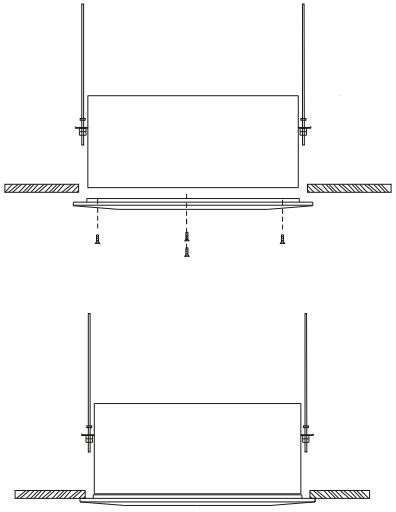
4.Display panel

5.Air inlet grille

dismounting the wind inlet retainer



panel Installation



1.Putting screw hole of panel installation aim at the position of screw thread in indoor unit, putting panel, and turning any two diagonal angles M6X20 bolt and M10-pad Screw into the indoor unit(screwing in but not screwing tightly)

2.Inserting the lead line on stepper motor in panel, connecting line on display board and the related line of electrical box , and then clearing up the inserted lines.

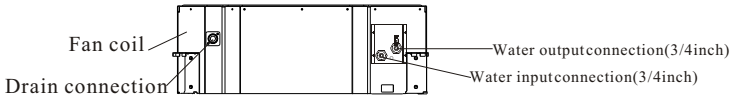
3.Putting other two M6X20 bolt and M10-pad Screw, screwing into indoor unit through hole of panel.

4.Adjusting the panel position and direction, make sure the wind out of panel anastomoses with the air flue of water drain. tightening the screw to make the panel paste with indoor unit tightly

5.Installing the air intake grill bake in accordance with the opposite process of withdrawing panel install cover and air intake grill.

III Connection of water connetion Pipes

1.Use 3/4 inch water pipes connect to the water connection of fan coil,which showed as below:



Note:there may be some diffirent between the picture and unit,please refer to the unit you got.

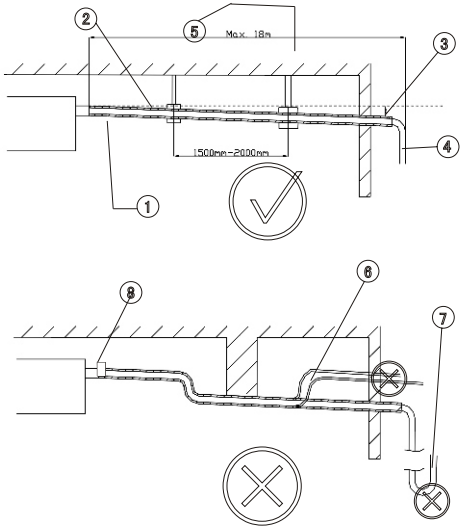
IV Connection of Draining Pipes

1.Use PVC pipes with I.D. Φ15 as draining pipe, and ensure the pipe is installed at downwards slope of more than 2/100.

2.Connect the draining pipes by using adhesive compound and connect pipe connector using PVC glue.

3.Check all the steps related with the piping.

4.Use connected draining hoses and change air discharge direction of pipes.



① Insulation materials（thickness: 9mm or more）

② Support of draining pipes

③ Min. sloping angle（1/100）

④ Draining pipe

⑤ Max. draining distance

⑥ Elevated bend（which should be avoided）

⑦ Sewage accumulation（which should be avoided）

⑧ Vent hole

RUNNING TEST

.Running test

1)Preparation

Before test, Please have a double check with the former installation carefully whether they are completely finished and reliable .(such as electric connection ,piping connection and attemperator)

2)Air discharge of the coil

When the water enters the piping system for the first time, little air will be left in the coil and then concentrated in the top of the coil. Hence there's a manual discharge valve set on the piping tie-in, turn(1-2 cycles anti-clockwise) the air-discharge knob in order to expel the air, screwing the knob tightly until there's steady water coming out.

3)Running test

1.Connect to the power, then press the remote controller to start the unit.

2.Adjust the H/M/L speed of fan motor, check whether there's any exceptional noise .

3.If there is hot water and cold water circulated in the piping system, observe whether there is any hot and cold wind blowing from the air outlet. If the unit is under the cooling condition, check if there's any condensate has drained out after a period of operating.

4.If there're water intake valve and electromotion valve? installed on the intake tube connector of the coil, please press the wall pad button to set the working mode to the cooling? or heating" according to the cooling and heating water circulation, then observe whether the water intake electromotion valve? is under normal operation and cold or hot wind blows from the air outlet.

5.Press the SWING button on the wall pad, check whether the louver is swing normally.

6.Press ON/OFF button to end the running test after confirming the unit is working smoothly.

▲NOTICE After finishing the running test, please specify the detailed air conditioner operation guide and caution

Trouble elimination:

If the unit still can not working properly through above test and the indicator light on the function indicating board□ flashing alert or fault code is shown on the wall pad, you should eliminate the trouble by below means .

Time indicator	Operation indicator	Electric assistant heating indicator	shown on the wall pad
Flashing	on	on	float switch movement.
on	Flashing	on	coil temperature sensor is open circuit or short circuit
on	on	Flashing	room temperature sensor is open circuit or short circuit